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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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09/445,088	12/02/1999	YUICHIRO NAKAYA	520.37902X00	9448
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EXAMINER

LEE, RICHARD J

ART UNIT

PAPER NUMBER

2613

DATE MAILED: 02/05/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.  
09/445,088

Applicant(s)  
Nakaya

Examiner  
Richard Lee

Art Unit  
2613



-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_\_
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-28 is/are pending in the application.
- 4a) Of the above, claim(s) \_\_\_\_\_ is/are withdrawn from consideration
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-28 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claims \_\_\_\_\_ are subject to restriction and/or election requirement

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner  
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some\* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\*See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).  
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

## Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s). \_\_\_\_\_ 6) ☐ Other:

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1. The request filed on November 26, 2002 for a Request for Continued Examination (RCE) is acceptable and a RCE has been established. An action on the RCE follows.

2. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

3. Claims 3 and 4 are rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. The Specification does not provide support for equation  $v(x+w, y+w)$  as claimed in claim 3, lines 27-30. The difference between equation  $v(x+w, y+w)$  as claimed and that shown at page 23 of the Specification is the "+" after "(y+w)" in the equation. Since the equation as claimed is different from that specified in the disclosure, such limitation as claimed constitutes as new matter. In addition, the Specification does not provide support for equations  $uT(x+w)$ ,  $vT(x+w)$ ,  $uB(x+w)$ ,  $vB(x+w)$ ,  $u(x+w, y+w)$ ,  $v(x+w, y+w)$  as claimed in claim 4, lines 10-14, lines 20-21, lines 25-28.

4. Claims 1-28 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

For examples:

(1) claim 1, line 8, after "where k", "and" should be changed to "is" for clarity;

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(2) claim 1, lines 31-32, “the two motion vectors” shows no clear antecedent basis;

(3) claim 1, line 35, “the motion vector calculated in said fourth step” shows no clear antecedent basis;

(4) claim 2, line 24, “liz” should be changed to “1/z” for clarity;

(5) claim 2, line 32, “the two motion vectors” shows no clear antecedent basis;

(6) claim 2, line 35, “the motion vector calculated in said fourth step” shows no clear antecedent basis;

(7) claim 3, line 13, “[///]” should be changed to “///” since only deletions should be made with brackets;

(8) claim 3, line 22, “(y-i)” in the  $v_R(y+w)$  equation should be changed to “(y-j)” in order to agree with that shown at page 22 of the Specification;

(9) claim 3, line 31, “[/]” should be changed to “/” since only deletions should be made with brackets;

(10) claim 4, line 29, “[/]” should be changed to “/” since only deletions should be made with brackets;

(11) claim 22, line 9, in the  $u'(x,y)$  equation, “(r·s·n·cd)” should be changed to “(r·s·n·cd<sup>2</sup>)” in order to agree with that shown at page 19 of the Specification;

(12) claim 22, line 11, in the  $v'(x,y)$  equation, “(r·s·n·cd)” should be changed to “(r·s·n·cd<sup>2</sup>)” in order to agree with that shown at page 19 of the Specification;

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(13) claim 22, line 15 “t1” should be changed to “v1” in order to agree with that shown at page 19 of the Specification;

(14) claim 22, line 17, “ $u2 = v'(i, j+q)$ ” should be changed to “ $v2 = v'(i, j+q)$ ” in order to agree with that shown at page 19 of the Specification;

(15) claim 22, line 19, “ $u3 = v'(i+p, j+q)$ ” should be changed to “ $v3 = v'(i+p, j+q)$ ” in order to agree with that shown at page 19 of the Specification;

(16) claim 22, line 20, after “where”, “//” should be properly inserted for clarity;

(17) claim 23, lines 14-15, “said interframe predicted image” shows multiple antecedent basis (see claim 1, lines 1-2, claim 23, line 3). Suggestion: at claim 23, line 2, after “image”, “according to claim 1” should be inserted; at claim 23, line 3, “an” should be changed to “the”; and at claim 23, lines 15-17, “, wherein said fifth step is performed by an interframe predicted image synthesis method according to Claim 1” should be deleted;

(18) claim 24, lines 14-15, “said interframe predicted image” shows no clear antecedent basis (see claim 1, lines 1-2, claim 24, line 3). Suggestion: at claim 24, line 2, after “image”, “according to claim 22” should be inserted; at claim 24, line 3, “an” should be changed to “the”; and at claim 24, lines 16-18, “said first step is performed by an interframe predicted image method as defined in claim 22” should be deleted;

(19) claim 24, line 19, “said motion vectors” shows no clear antecedent basis;

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(20) claim 25, line 2, “the representative points in said fifth step” shows no clear antecedent basis. In addition, “said fifth step” shows multiple antecedent basis (see claim 1, line 33, claim 23, line 13);

(21) claim 26, line 12, “said interframe predicted image signal” shows no clear antecedent basis. Suggestion: at claim 26, line 1, after “method”, “using a method of synthesizing an interframe predicted image according to claim 1” should be properly inserted; at claim 26, line 12, “after “interframe predicted image”, “signal” should be deleted; at claim 26, lines 15-16, “said third step is performed by an interframe predicted image synthesis method according to Claim 1” should be deleted;

(22) claim 26, line 9, “said image” should be changed to “said image frame” in order to provide proper antecedent basis for the same as specified at line 3;

(23) claim 27, line 2, “said plural representative points” shows no clear antecedent basis;

(24) claim 27, line 3, “said image” shows no clear antecedent basis;

(25) claim 28, line 2, “said plural representative points” shows no clear antecedent basis;

and

(26) claim 28, line 3, “said image” shows no clear antecedent basis.

5. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

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6. Claims 1-28 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter for the same reasons as set forth in paragraph (3) of the last Office Action (see Paper no. 9). Even though independent claims 1 and 2 have been amended to include a fifth step as well as language within the preamble and the respective claims, claims 1 and 2 still recite various steps of calculations that solves a purely mathematical problem without limitation to a practical application, essentially a series of steps to be performed on a computer, and merely manipulates an abstract idea which lacks any use. In addition, claims 1 and 2 respectively do not provide an end product or physical application to further provide any useful, concrete, and tangible results as required to fall within the statutory classes set forth in 35 U.S.C. 101 and in view of State Street Bank & Trust Co. V. Signatures Fin. Group, Inc. Even though the current independent claims (i.e., claims 1 and 2) respectively provide an interlink between the preamble and the body of the claims, as argued at page 10 of the amendment filed October 29, 2002, another requirement of providing an end product or physical application is required in order to overcome a rejection under 35 U.S.C. 101 as explained above. And since dependent claims 3-28 are directed to further computational limitations, claims 1-28 as a whole for reasons above do not fall within the statutory classes set forth in 35 U.S.C. 101.

In order to overcome the above 35 U.S.C. 101 rejection, it is suggested that “to produce motion vectors” should be properly inserted after “reference image” at claim 1, line 2 and claim 2, line 2, respectively.

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7. **Any response to this action should be mailed to:**

Commissioner of Patents and Trademarks

Washington, D.C. 20231

**or faxed to:**

(703) 872-9314, (for formal communications intended for entry)

(for informal or draft communications, please label "PROPOSED" or "DRAFT")


Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive,  
Arlington, VA., Sixth Floor (Receptionist).

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Richard Lee whose telephone number is (703) 308-6612. The Examiner can normally be reached on Monday to Friday from 8:00 a.m. to 5:30 p.m., with alternate Fridays off.

Any inquiry of a general nature or relating to the status of this application should be directed to the Group customer service whose telephone number is (703) 306-0377.

Richard Lee/rl

1/30/03



RICHARD LEE  
PRIMARY EXAMINER